
Optimizing crowdsourcing websites to increase volunteer participation

A case study: *What's on the Menu?* New York Public Library

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Abstract

This paper focuses on a form of crowdsourcing that outsources ‘micro-tasks’ to virtual volunteers, within the context of a clearly defined Digital Humanities project contributing to preservation and research. The success of such projects relies on sufficient volunteer contributions over a period often limited by project budgets and resources. An understanding of website optimization can enable project teams to invite, instruct and incentivize ‘the crowd’ more effectively, and increase volunteer participation. Website optimization spans the disciplines of usability, human-computer interaction, and user-centred design, which are approaches traditionally used by web developers, designers, and online copywriters. With the rise of online collections, cross-disciplinary research and Digital Humanities, such boundaries are, often by necessity, rapidly dissolving; consequently, librarians, archivists, curators and Humanities scholars are using these approaches too. With a view to informing the planning, development and evaluation of future projects, this paper aims to give Digital Humanities project teams a deeper understanding of the main elements impacting on volunteer participation. It identifies a website optimization framework relevant to non-profit crowdsourcing, and demonstrates how it can be applied using the example of *What’s on the Menu?* a website developed by the New York Public Library.

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Introduction

Technology is contributing to the rise of an increasingly participatory culture; lowered barriers to civic engagement and evidence that personal contributions matter are encouraging people to take a more active role (Denton 7; Howe). This shift is reflected in the success of crowdsourcing projects driven by such institutions as the British Library, US Archives, National Library of Australia, and University of Oxford.¹ Jeff Howe explains that crowdsourcing isn't a single strategy, but 'an umbrella term for a highly varied group of approaches' (280). This paper concentrates on the outsourcing of 'micro-tasks' to virtual volunteers, within the context of a clearly defined Digital Humanities project contributing to preservation and research.² Specifically, it examines the website *What's on the Menu?* which enables virtual volunteers to assist with the transcription of New York Public Library's historical restaurant menu collection. The success of such projects relies on sufficient volunteer contributions over a period often limited by project budgets and resources. An understanding of website optimization can empower project teams to invite, instruct and incentivize 'the crowd' more effectively, and increase volunteer participation.

Website optimization involves clearly defining the objectives of the website and aligning them with the objectives of the online visitor. It aims

¹ Recent crowdsourcing projects include *UK Sound Map* and *Map Your Voice* (British Library), *WikiProject NARA* and *Tagging Online Public Access Records* (US Archives), *Trove* (National Library of Australia) *Ancient Lives*, *Galaxy Zoo*, *Old Weather*, *The Great War Archive*, and *What's the score?* (University of Oxford).

² 'Micro-labor refers to work that is broken down into smaller parts or a work process that consists of tiny or compact tasks, usually to complete a bigger task or project.' (Sherman 9) Such compact tasks are commonly referred to as micro-tasks.

to maximize visitor motivation and relevant incentives, and minimize sources of frustration and concern. Website optimization spans the disciplines of usability, human-computer interaction, and user-centred design, which are approaches traditionally used by web developers, designers, and online copywriters. With the rise of online collections, cross-disciplinary research and Digital Humanities, such boundaries are, often by necessity, rapidly dissolving; consequently, librarians, archivists, curators and Humanities scholars are using these approaches too. Project teams outsourcing web development and design need to clearly convey website objectives and influential factors to the contractor; for those evaluating existing templates, or relying on in-house expertise, which may have little or no experience with crowdsourcing campaigns, the ability to identify and articulate these priorities is even more essential.

New Zealand's academic and cultural heritage institutions are increasingly identifying crowdsourcing as a method of engaging the community, and enhancing large quantities of digitized content faster and more cost-effectively. Currently, this takes the form of applications integrated with digitized collections that predominantly aim to encourage greater community engagement.³ In these cases online visitors are invited to tag, comment, vote, 'like', 'share' or link geographical locations to online content, or generate new content. However, several institutions are investigating other approaches. Archives New Zealand plans to use

³ Examples include the digitization of First World War embarkation rolls at Auckland War Memorial Museum, in collaboration with New Zealand Electronic Text Centre (NZETC) (Yeates; Darwin), the geo-tagging project at Christchurch Art Gallery (Jones), *OurSpace - The Museum of New Zealand* (Kingston), *Places - NZ On Screen* (Leeuwenberg), *Quake Stories* (Mackay), *The Community Archive*, *Digital NZ*, *Kete Christchurch*, and *Matapihi*.

crowdsourcing in the future to ‘provide increased granularity of metadata for richer, more accurate search results’ (Almond), and the National Museum of New Zealand is interested in utilizing the public’s knowledge to further develop existing online collections (Kingston). Based on the success of the National Library of Australia’s *Trove* project, the National Library of New Zealand is investigating crowdsourcing as a way to enhance their digitized historical newspaper collection (O’Reilly). Several university libraries are also considering crowdsourcing, including University of Auckland (Laurie), University of Otago (Brown), and the Hocken Library (Poland). Macmillan Brown Library at the University of Canterbury already uses crowdsourcing on a small scale, whereby archival material is uploaded to *The Community Archive* website and specialist groups are invited to identify subjects and locations (Durney; Palmer). With a view to informing the planning, development and evaluation of future projects, this paper presents a discussion of website optimization in the context of non-profit crowdsourcing, and a detailed examination of a Digital Humanities website highly optimized for volunteer participation.

Part 1 ‘Website Optimization’ explains the basic theory and practice of website optimization in the context of related fields. It describes the main elements impacting on the perceptions, actions and experience of online visitors, and identifies a website optimization framework for conversion that specifically relates to the kind of crowdsourcing project defined above. It concludes by addressing the role of website testing and traffic tracking. The remaining parts of the paper examine *What’s on the Menu?* demonstrating how web pages and processes can be optimized to fulfil key website

objectives. Part 2 ‘Inviting the Crowd’ addresses the conversion of online visitors to potential contributors, and considers the institution home page, marketing communication channels, project home page and volunteer registration. Part 3 ‘Instructing the Crowd’ focuses on the conversion of potential contributors to active contributors, and analyzes website navigation, the ‘About’ page, and task instructions and guidelines. Part 4 ‘Incentivizing the Crowd’ looks at increasing volunteer contributions, and examines the task interface, workflow, acknowledgement, and community. Throughout, the paper draws on lessons learned from recent projects, and research in the fields of crowdsourcing, usability, human-computer interaction, and user-centred design to support the discussion of website objectives and website optimization.

1. Website optimization

1.1 Website optimization in theory and practice

Michael Denton observes that crowdsourcing ‘is concerned with understanding human behaviour rather than technology, and is equally applicable offline’ (8). Likewise, website optimization for virtual volunteers is best understood by envisaging the offline equivalent. The project website is where volunteers congregate; ideally, it’s welcoming, with clear signage and appealing workspaces. It’s obvious who’s in charge, why the volunteers are here, what they need to do and how it’s done. Volunteers know where to find help at any stage, and their valuable free time is not wasted being confused, frustrated, or bored. There are opportunities to mix with and learn from other volunteers. They sense the buzz of activity and see progress being made. Perhaps they’ve only dropped by for a short time or they stay longer than intended; either way, their contributions are acknowledged, and they leave in a positive state, looking forward to their next visit. Usability author Steve Krug talks about the ‘reservoir of goodwill’ that visitors bring to a website, and explains that each problem they encounter lowers its level (162). To maximize the potential of that reservoir, Digital Humanities project teams need to provide a rewarding user experience by actively optimizing the site for participation.

Website optimization encompasses all aspects of a project website, from the planning, development and testing stages to the tracking and analysis of online behaviour. It shares common ground with human-computer interaction, user-centred design, interface design and activity

theory. These approaches aim to understand user behaviour, and make interaction as simple and efficient as possible by focusing as much on how well technology works, as what it does (Denton 18, 48; Garrett 10). Website optimization also implies a connection with commercially based websites focused on conversion, making it particularly applicable to Digital Humanities projects that rely on online participation. Factors commonly acknowledged as impacting on the online user experience are consistency, readability, website navigation, arrangement of page elements, language, visual appearance, page load speed, and the number and complexity of processes required to complete the desired action. Although the subject is beyond the scope of this paper, search engine optimization (SEO) also impacts on online participation. Applied effectively, it increases the probability of project pages appearing early in search engine results generated by people interested in related subjects.⁴ Methodologies related to website optimization are comprehensive, specialized, and often use a variety of terms to convey similar concepts. For this reason they serve the purposes of this paper best as illustration, rather than a practical means of application. The next chapter introduces a more concise, targeted method of applying the theory of website optimization to Digital Humanities crowdsourcing projects.

⁴ As an example, basic SEO would require URLs, page titles and headings to include 'keywords' relating to the digitized content.

1.2 The five main elements impacting on conversion

Practitioners from both the cultural and commercial sectors have identified the main elements that impact on online visitor behaviour. Rose Holley has written extensively on crowdsourcing, particularly in relation to the digitization of library collections. Both the National Library of New Zealand and National Archives acknowledge the influence of Holley's research on their investigations into potential strategies for crowdsourcing (Almond; O'Reilly). Based on her observations as manager of *Trove*, Holley emphasizes the importance of clearly stating the goal of the project, identifying 'the crowd' and understanding their motivations, and providing relevant incentives, as well as making the online environment intuitive, reliable, quick and easy to use ("Crowdsourcing").

The commercial sector provides a more developed optimization framework, which supports Holley's observations and the tips she provides in "Crowdsourcing". Flint McGlaughlin is the Director of MECLABS, the first Internet based research laboratory specializing in optimization. He offers a more formulaic approach for identifying and evaluating specific page elements impacting on the effectiveness of a website. McGlaughlin explains that 'conversion is the process of successfully achieving the primary objective of a specific page or website'. The five main elements he identifies as impacting on conversion are clarity of the value proposition (why the visitor should take action), user motivation, incentives, friction and anxiety. He points out that in the context of website optimization, 'friction' refers to the aggravation, fatigue or confusion of the online visitor, and

‘anxiety’ to concern about aspects of the website or online process.⁵ Based on real-world experimentation,⁶ MECLABS has observed that the probability of conversion is subject to the relationship between these five elements; clearly defined reasons for the visitor to take action need to be aligned with visitor motivations, elements of friction need to be offset by incentives, and anxiety minimized. The following chapter explains in more detail how McGlaughlin’s five-element framework applies to non-profit crowdsourcing websites, providing context for the examination of *What’s on the Menu?*

1.3 Applying McGlaughlin’s five elements to non-profit crowdsourcing websites

In “Non-Profit Organization Websites: Increasing Donations and Volunteering” web usability consultant Jakob Nielsen argues that ‘Non-profits must clearly communicate their value proposition if they want to attract volunteers... Sadly, such communication is the sore point in the non-profit user experience.’ In the context of non-profit crowdsourcing, McGlaughlin’s first element is the ‘who, what and why?’ of the project, representing the mutually beneficial exchange between the institution and the volunteer. For the value proposition to be effectively conveyed, project teams need to identify the common motivations of likely contributors. To do this they might draw on existing information about current users of the

⁵ For more detailed explanations supported by real-world optimization experiments see McGlaughlin, “Landing Page Optimization Online Course”, which addresses all pages and processes associated with the main landing page.

⁶ MECLABS has partnered with the New York Times, Microsoft Corporation and Reuters Group, among others.

institution's services (or comparable services). They may also use existing communication channels, surveys, focus groups, online forums and community events to approach relevant networks and specialist groups (Almond; O'Reilly). With sufficient information, project teams may choose to create potential volunteer profiles or 'personas', in order to clarify their interests and objectives (Waters 69; Holley, "Crowdsourcing").

With regards to motivation, McGlaughlin's second element, recent crowdsourcing surveys have, in some cases, challenged assumptions about volunteer motivation and had a significant impact on the way in which the project has evolved (Smith). Common volunteer motivations include the size of the challenge, the necessity for volunteer contribution, collaboration with prestigious institutions, contribution to research, education, mental stimulation, being part of a community, personal research interests, and enhancing a resource from which they will benefit (Smith; Durbin; Holley, "Crowdsourcing").

McGlaughlin explains that effective incentives reflect an understanding of these motivations, and recent crowdsourcing projects offer several approaches. Websites may include regular updates indicating project progress, evidence of how new data is being used, or incorporate 'leader boards' or 'halls of fame' that acknowledge top contributors. Project teams may acknowledge volunteer contributions in published research, provide open access to the online resources being created or enhanced, or promote a sense of community by enabling volunteers to interact with each other and the project team ("RunCoCo").

Sources of friction, McGlaughlin's fourth element, can sometimes be difficult to identify by project teams with prior knowledge. Forms of friction encountered by online visitors can include confusing navigation, slow page load speed, readability issues, uncertainty over what something means or does, difficulty locating information and instructions on a 'busy' page, and the number and complexity of processes required to complete the desired action. In this regard, Krug explains, 'when you're creating a site, your job is to get rid of the question marks' (13).

McGlaughlin points out that online visitor anxiety is closely related to perception. He urges project teams not to undermine this aspect of the user experience, and to 'over-correct' potential sources of anxiety where possible. In the context of non-profit crowdsourcing, visitor concerns may include the credibility of the project, or entering personal information during the sign up process. New volunteers might be concerned about using the task interface incorrectly, or entering data inaccurately. Kent Norman observes in *Cyberpsychology* how stress and anxiety impede motivation (254-255). Where friction can cause confusion, frustration and boredom, anxiety can cause visitors to hesitate, or abandon the website, all of which negatively impacts on volunteer participation. To meet the needs of the online visitor undergoing these often simultaneously occurring thought processes, and fulfil the objectives of the project website, every web page element needs to serve a clearly defined purpose. Testing and tracking of user behaviour can help Digital Humanities project teams identify the website elements impacting positively and negatively on conversion.

1.4 The role of testing and tracking

Web design author John Waters explains that data can be used continuously to increase the value of a website, improving the relationship with online visitors by providing a better, more useful experience (182). Where budgets allow, project teams can optimize websites by testing at various stages of development, tracking online behaviour, and encouraging user feedback throughout the campaign. The concept of the ‘average user’ is contentious, and making assumptions about user behaviour risks the success of the project. Krug asserts that ‘testing one user is 100 percent better than testing none... testing one user early in the project is better than testing 50 near the end’ (133). For project teams limited by resources, or encountering resistance from primary stakeholders concerned with the cost of expertise required, it’s important to understand and convey the benefits and implications of testing and tracking.

One way to elicit user feedback is to have a ‘soft’ launch, whereby select groups of volunteers are invited to test the live website before an open call goes out to the public. The original beta (or live testing) version of *Trove* was submitted to four rounds of testing using a representative sample of the public. In “Many Hands Make Light Work” Holley notes that ‘actively seeking feedback from the public and developing a prototype and beta version resulted in suggestions from users that were innovative, fresh, and viable and helped shape development of the service to better meet user needs.’ Likewise, the Digital Humanities Start-Up funding for *What’s on the Menu?* subsidized a six-month pilot period ‘focused on building up public participation from overlapping food communities, and honing and

improving the user interface' ("What's on the Menu? Crowdsourcing Culinary History").

Other approaches include enabling online users to provide ongoing feedback during the course of the project, and monitoring responses to the site shared in online community spaces, such as blogs, forums and social networks. For project teams developing and maintaining the website in-house, another option is simultaneous testing of one version of a web page against another, known as content or a/b testing. Examples of web page elements that might be tested in this way include language, layout, images, buttons, background colours, and the length of copy, all of which have the potential to influence online visitor behaviour and volunteer participation.

John Waters considers the allocation of resources to post-launch project maintenance a crucial part of the planning phase, explaining 'the site must be monitored, assessed, evaluated, and measured for success against the original criteria. Continuous adjustments and additions will need to be made. Resources – human and economic – will need to be committed to the maintenance of the site' (182). Website tracking, or analytics, plays an important role in this post-launch process, enabling project teams to better understand the online behaviour of visitors and users, and determine the extent to which project objectives are being met. Such data may include the quantity of visitors (or traffic) arriving at the website, the time spent on the site, bounce rate,⁷ the countries and demographics represented, the method by which visitors arrived at the web page, their response to certain page

⁷ Bounce rate is the term used to describe the proportion of online visitors that click away from the website within a certain time frame.

elements, average visitors per week, and the influence of external events such as press coverage about the project. Combined with data that quantifies the online visitors who register as volunteers, actual contributors, abandoned and completed tasks, and the rate of volunteer participation, this information better enables Digital Humanities project teams to assess the effectiveness of the website and the success of the project. For those investigating options for testing and tracking, Google Analytics is a free service that includes 'Website Optimizer' within its suite of tools, and the website *Alexa* provides free web information.

Data drawn from analytics during the pilot phase enabled the project team for *DigitalKoot*, an Optical Character Recognition (OCR) text correction project run by the National Library of Finland, to report that in the first seven weeks of the project almost 5,000 online visitors gave over 2,740 hours of their free time, which was considered 'quite an accomplishment in a country with a population of 5.3 million' (Chronis and Sundell 5). The California Digital Newspaper Collection project team has also learned about online traffic and user behaviour in this way. In June 2011, Brian Geiger reported that 'usage ... continues to increase by 15 percent to 20 percent per month in terms of the number of page views and time spent on the site. In May the site had well over 18,000 visitors, nearly 300,000 page views and an average time spent on the website of more than 9 minutes. The biggest users continue to be genealogists and independent researchers; academics represent one of the smallest constituencies' ("California Weekly Newspapers to be Preserved Online"). These examples illustrate how project teams might identify the 'crowd', quantify user

behaviour, and measure the effectiveness of the website to improve the online visitor experience and the rate of volunteer participation.

As a virtual volunteer, the author used and observed the beta version of *What's on the Menu?* over the course of its six-month pilot phase. The site was custom-designed by a dedicated project team, and launched by New York Public Library on 18 April 2011 ("What's on the Menu? Crowdsourcing Culinary History"). On 23 October 2011, the website stated that 595,773 dishes had been transcribed from 10,263 menus. The following chapters analyze web pages and processes to demonstrate how value proposition, motivation, incentive, friction and anxiety can impact on volunteer participation. The case study is presented in three parts to highlight the three main website objectives of a Digital Humanities crowdsourcing project, and draws on data from recent projects in preliminary discussion of these objectives.

2. Inviting the Crowd

2.1 Increasing conversion of online visitors to potential volunteers

Not every online visitor to an institution or project home page arrives intending to participate; thus, a project's first objective is to 'invite the crowd' in a way that converts online visitors to potential volunteers. This objective specifies 'potential volunteers' because research shows that not every registered volunteer actually contributes (Wallace and Causer; Holley, "Crowdsourcing"). The untapped potential of the crowd can be significant, and *Digitalkoot* provides an example. In the first 51 days of the project 31,816 people visited the website, but only 15% [or 1 in every 6.7 visitors] participated (Chronos and Sundell 3).

The first step to converting online visitors is to ensure the 'invitation' concisely and clearly states who is driving the project, the nature and purpose of the project, and the action visitors are being asked to take (Sherman 52). This needs to be crafted for a diverse online audience, which could include the institution's existing user base, international visitors, those directed from another website, forum, blog, or social network, and those who have arrived at a project web page via a related search. Online visitors do not arrive at a website with the same degree of knowledge about the institution or project, and may vary considerably in age, technical ability and subject expertise; some may have fifteen minutes of spare time in their lunch hour to potentially contribute to the project, others may have several hours a day. A clearly defined, effectively expressed, and mutually beneficial value proposition or 'invitation' that embraces the diversity of the

crowd contributes significantly to the conversion of online visitors. Once established, project teams need to determine the channels by which this message is conveyed.

2.2 Institution home page and marketing communication channels

Krug describes a website home page as a ‘one size fits all’ page with too many cooks in the kitchen. He explains it’s ‘not like other pages – it has different burdens to bear, different promises to keep’, and ‘everybody wants a piece of it’ (62, 97). This partially explains why the opportunity to invite institution home page visitors to participate in the project may be limited or in fact, never arise. It’s also a question of relevance: for Digital Humanities projects driven by academic institutions, the relevance of the project to the wide range of institution home page visitors may be minimal, making the argument for competing with existing online content somewhat implausible. However, this should not be the case for libraries, archives or cultural heritage institutions, which have a more specific focus and target audience. While it may not be feasible to dedicate a large proportion of this prime online real estate to the project, a strategically placed value proposition on the institution home page for at least part of the campaign has the potential to increase the traffic of prospective volunteers to the project home page.

An alternative or complementary approach to promoting the project and calling for volunteers is to use new and existing marketing communication channels, such as newsletters, online forums, social media, road shows and community events. Following the soft launch of *What’s on the Menu?* New York Public Library (NYPL) put out an open call to

newsletter subscribers in June 2011 (see fig.1). This correspondence will serve to demonstrate how McGlaughlin's five-element optimization framework can be applied to content aiming to convert the wider institution's 'crowd' to potential volunteers.

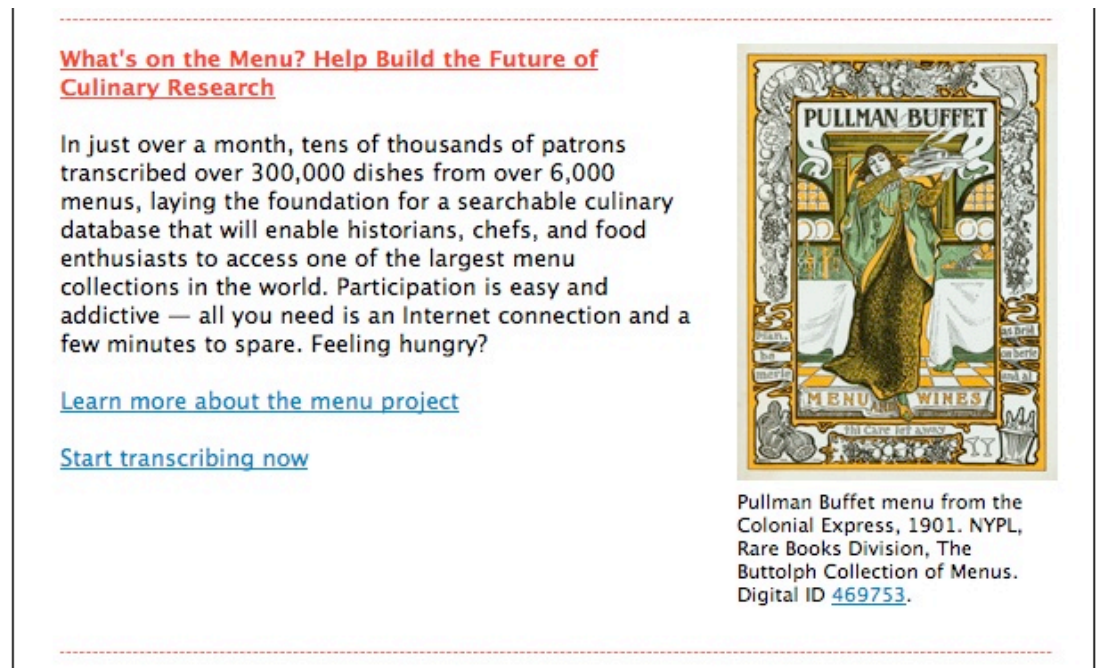


Figure 1 "NYPL News" Message to the author. 8 June 2011. Email

The relevant section of the e-newsletter starts with a question, which in this case is also the name of the project, simultaneously hooking the attention of the reader and conveying the project focus. This is followed by the value proposition 'Help build the future of culinary research', which implies a mutually beneficial exchange between institution and volunteers, whereby NYPL patrons and supporters can help the library generate data that will contribute to future research. The value proposition is prioritized in the form of a heading, incorporates a call to action using the imperative 'Help', and facilitates this action by directly linking to the project home

page. The effectiveness of this value proposition is debatable; one could argue that it limits the project's relevance to the wide readership by focusing on culinary research, the purpose of the project is vague, and it doesn't directly state who is asking for help. This may explain why the value proposition used in the June correspondence differs from 'Help the New York Public Library improve a unique collection', observed on the project home page in August.

The email goes on to address likely motivations of potential volunteers: by joining 'tens of thousands of patrons' transcribing menus, readers will be part of a community, and contribute to a new resource for international research. Readers who respond to a challenge can help to digitize 'one of the largest menu collections in the world', and those with a particular interest in food and culinary history can aid the research of fellow 'historians, chefs, and food enthusiasts'. Readers are incentivized with the 'addictive' nature of participation, proof of rapid progress, and an appealing image of a sample menu from the collection.

Perceived friction or anxiety, such as lack of expertise, technical obstacles or time-consuming contribution is addressed with the explanation that it's 'easy', and 'all you need is an Internet connection and a few minutes to spare'. The email uses two calls to action: 'Learn more about the menu project' and 'Start transcribing now', both of which link to the project website; this meets the needs of readers who require further information before making the decision to volunteer, and those prepared to participate. While this correspondence demonstrates how value proposition, motivation, incentive, friction and anxiety serve as an optimization framework to

identify, assess and articulate online elements impacting on conversion, an examination of the project home page provides a more comprehensive example.

2.3 Project home page

Recalling the real-world equivalent, the project home page can be thought of as an entrance to the institution, designed to encourage new visitors over the threshold. Its main objective is to convert new online visitors to potential volunteers, many of whom may have arrived at the page with only the intention to learn more about the project. An effective invitation to participate relies on a 'clear visual hierarchy' presenting page elements in order of priority, and a clear call to action (Krug 31).

What's on the Menu? prioritizes and reinforces the value proposition 'Help the New York Public Library improve a unique collection' in a highly structured manner (see fig.2). The page header informs visitors that this is a NYPL website, and the name of the project features prominently below. Directly beneath, an appealing selection of hyperlinked menu cover images illustrate the 'unique collection', which change over time to incentivize returning visitors with new content. Below the images in the left column the heading clearly states the value proposition, which is supported by the brief explanation, 'We're transcribing our historical restaurant menus, dish by dish, so that they can be searched by what people were eating back in the day. It's a big job so we need your help! [Learn more](#)'. Finally, the large bold hyperlinked heading below gives a clear call to action, '[Start Transcribing!](#)'. All of these page elements have been placed in the top left of the page,

following the visitor's natural eye path. Within seconds of arrival visitors know who is driving the project, what the project is, why they should get involved and what they can do next.

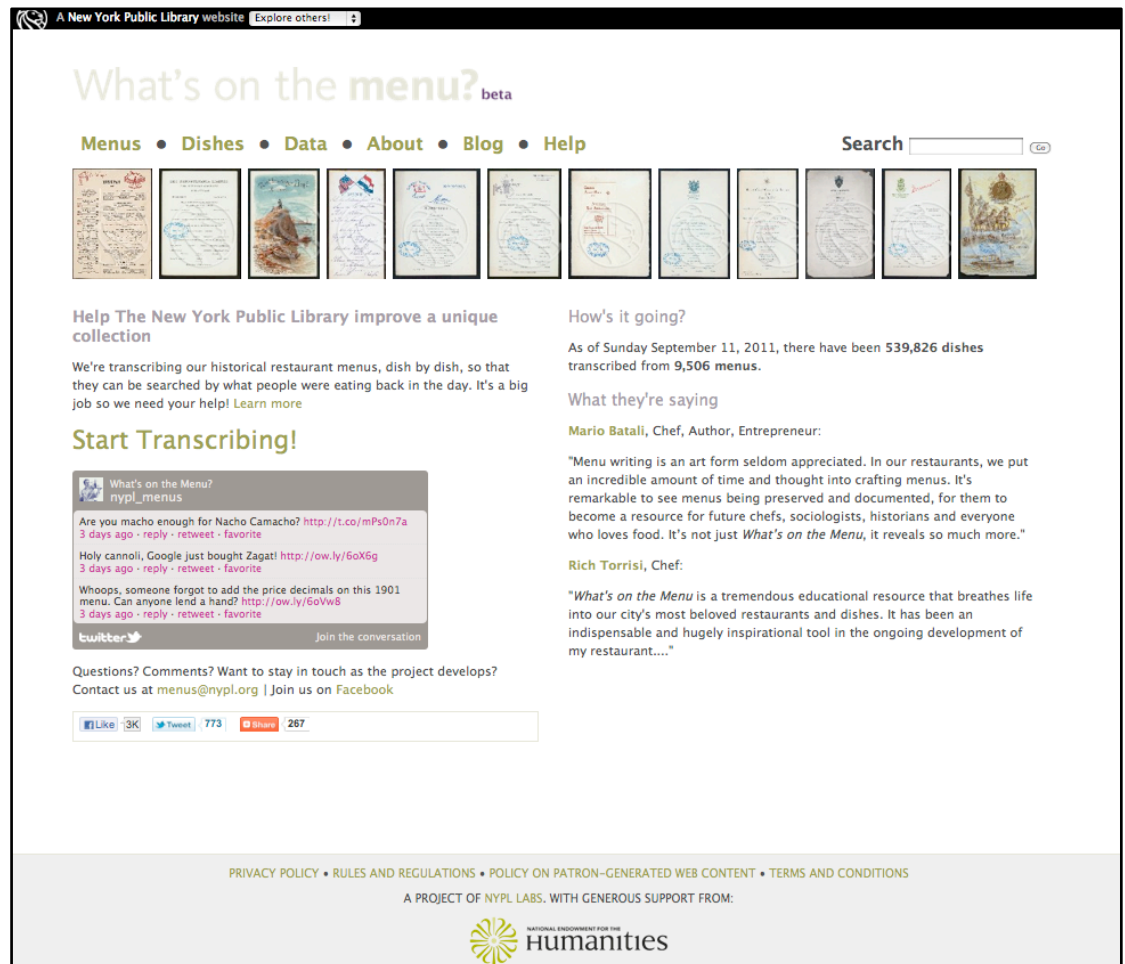


Figure 2 "What's on the Menu?" *What's on the Menu?* Web.

The value proposition and supporting explanation reflect likely motivations to participate: help a prestigious institution, engage with a unique collection, indulge a subject interest, contribute to research, take on a challenge, and learn something new, which effectively promote a mutually beneficial exchange between institution and volunteer. Based on the visual hierarchy, the NYPL also considers being part of a community a key

motivation for participation, and uses social networks to facilitate this. Below the call to action is a dynamic *Twitter* feed, and an invitation to contact the project team with questions and comments, and join the community on *Facebook*. Visitors are encouraged to share and show their support for the project using the social media links below.

The right column addresses relevant incentives: a search box indicates the data being generated by volunteers is freely accessible, daily project updates provide proof of progress, and industry testimonials illustrate how this new online resource is being used. Any potential anxiety about participating in the project is minimized with credibility indicators: the NYPL banner, the National Endowment for Humanities footer, privacy policy, rules and regulations, policy on patron-generated web content, terms and conditions, an email address, an active community, proof of daily progress and industry testimonials. Friction is minimized by a clean, uncluttered design that ensures no superfluous elements impede online visitors from receiving the key information they need to learn more about the project and start volunteering.

2.4 Volunteer registration

An incentive for some visitors, and a source of friction and anxiety for others, volunteer registration can impact positively and negatively on the conversion of online visitors to potential volunteers. Requiring online visitors to register and log on before they can participate enables project teams to identify and acknowledge top contributors, and potentially learn more about user demographics. However, visitors may be hesitant to provide personal information, some may want to simply ‘try it out’ without going through the process of sign up, and others may want to transcribe without the hassle of logging on each time.

Recent research can help Digital Humanities project teams weigh up the advantages and disadvantages of incorporating volunteer registration. A survey of volunteers contributing to the University College London project *Transcribe Bentham* indicated that while competition and recognition were not significant motivational factors for most, they were for the top contributors. In June 2011 Tim Causer reported that seven ‘super transcribers’ represented 0.6% of registered users and 70% of actual contributions (Wallace and Causer). For these volunteers registration is in their interests, and the project leaderboard, which acknowledges top contributors with a points system, is an incentive. On the other hand, requiring online volunteers to register and log on can be a barrier to participation (Almond). Reporting on the *Trove* project Holley observed, ‘Initially 50% of the corrections were done by anonymous users and 50% by registered users but by the end of 6 months 80% of corrections were being done by registered users’ (“Many Hands”).

Based on this evidence, compulsory registration has the potential to negatively impact on the number of volunteers, but actual contribution may suffer without a system in place to track and acknowledge user participation. *What's on the Menu?* addresses this issue in the frequently asked questions (FAQ) section of the “About” page. In answer to ‘Can I create an account?’ visitors are informed that ‘During this first experimental phase, we’re trying to keep things as open as possible, but we intend before long to add a user account system to start more visibly tracking contributions from the community. We’re grateful for the time/effort you devote to this endeavor, and hope to be able to recognize some of our top contributors down the road.’ In this way the site minimizes friction and anxiety for new visitors to the site, matches visitor motivation with future incentive, and maximizes the potential for contribution during the pilot phase.

3. Instructing the Crowd

3.1 Increasing conversion of potential volunteers to active contributors

As of March 2011, only 259 of 1207 registered volunteers had contributed to *Transcribe Bentham*, and lack of time for learning how to transcribe was the single most dissuading factor (Wallace and Causer). This example highlights a distinct conversion process that Digital Humanities project teams need to understand and address. Howe explains that ‘people might be enthusiastic and capable of some level of self-organization... but they also require direction and guidance and someone to answer their questions’ (284). In order to convert potential volunteers to active contributors, the project website needs to instruct online visitors in a way that promotes user confidence and allays any concerns about participation. It needs to meet the needs of a diverse crowd with varying degrees of knowledge, expertise, technical ability and available time. Some visitors may wish to explore the site before they begin, and others may want to refer to guidelines and instructions before using the task interface. The web pages and processes supporting this objective include those presenting information about the project aims and project team, frequently asked questions, interface instructions and guidelines, virtual tours and tutorials; together these represent a virtual ‘information desk’ for potential volunteers. Another is website navigation, which facilitates orientation and information delivery.

3.2 Website navigation

A well optimized website ensures online visitors make the most of their time on the site. In this regard navigation can be a source of friction, causing confusion, hesitation and frustration, but employed creatively and effectively it can contribute to an enjoyable and valuable user experience. There is more to consider than the primary navigation typically located in the margin; page elements contributing to the flow of information also include hyperlinked images and icons, tabs, inline navigation or anchor text, search fields, and sideways navigation such as arrows. In *The Elements of User Experience*, Jesse Garrett observes that ‘web site architectures are often called on to do more than just help people find things, in many cases, they have to educate, inform, or persuade users’ (94). Similarly, Denton asserts that wherever possible the language used for navigation should invite contribution, as long as it doesn’t impede usability (50). An examination of *What’s on the Menu?* demonstrates how navigational elements can be optimized for the conversion of potential volunteers to active contributors.

In this case the primary website navigation is preceded by drop-down navigation in the NYPL banner, which invites visitors to explore other NYPL websites and social media spaces (see fig.3). This initial focus on the institution minimizes anxiety by reinforcing the credibility of the project. The selection of community spaces and other library resources reflect likely motivations of volunteers, supporting the idea of a mutually beneficial exchange.

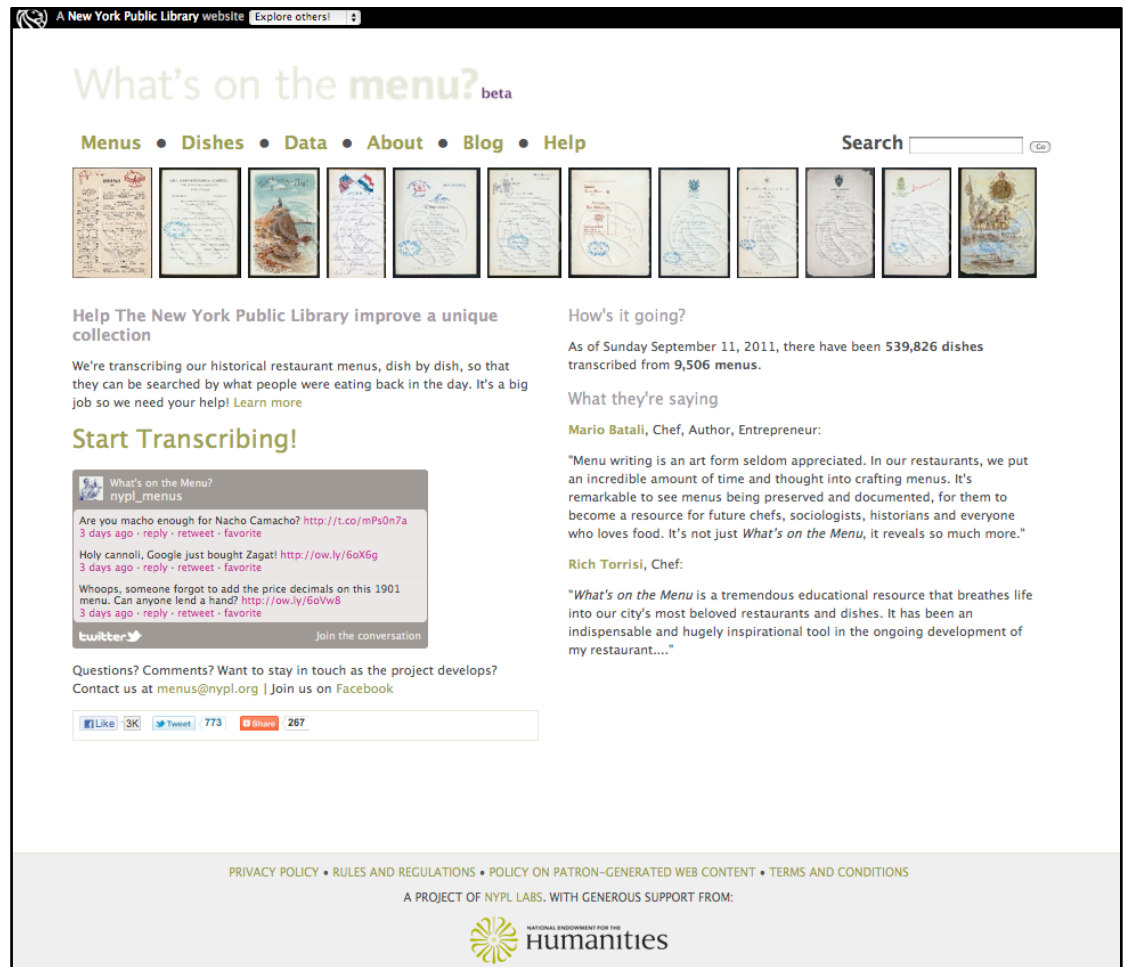


Figure 3 "What's on the menu?" *What's on the Menu?* Web.

In an effort to minimize friction the primary site navigation is prominently positioned beneath the banner. It also uses large readable font and limits navigation to six options. However, the language it employs has the potential to cause momentary confusion and hesitation for new visitors seeking specific information. It may not be immediately obvious that 'Menus' will direct visitors to the task interface, 'Data' to downloadable menu files, and 'Dishes' to a hyperlinked list of the most recently added dishes. Nevertheless, this small degree of friction is offset by the way the customised language reflects the nature of the collection and the purpose of

the project. Together with the search box, offering another way to explore the site, the primary navigation encourages potential volunteers to explore.

This navigation is consistent throughout the website, minimizing friction by ensuring online visitors are at no stage disoriented, and can easily locate a previously visited page (although it should be noted that access to the project 'Blog' takes visitors to NYPL's main website). Waters explains that maintaining this structural integrity provides visitors with a sense of place, continuity, and stability (88). The footer navigation linking to NYPL privacy policy, rules and regulations, policy on patron-generated web content, and terms and conditions also appears consistently throughout the site. This minimizes anxiety by highlighting the project's legitimacy, and enabling new visitors to seek answers to related questions at any stage of exploration and participation. Other elements discussed in later chapters provide additional modes of navigation, such as hyperlinked menu images and creative anchor text ('Feeling hungry?' takes a visitor to *Menus*). Overall, the website navigation makes *What's on the Menu?* a welcoming space that's fun and easy to use, incentivizing potential volunteers to explore the website and get involved.

3.3 ‘About’ the project

For crowdsourcing projects, an ‘About’ page is an opportunity to emphasize why visitor contribution is important, how the institution will make use of it, and the benefits of participation (Sherman 53). This in itself may be sufficient for visitors familiar with the physical institution, but for online visitors who are unfamiliar, additional information about the collection, the project team, photos and contact details, can promote trust and transparency, and minimize any concerns about getting involved.

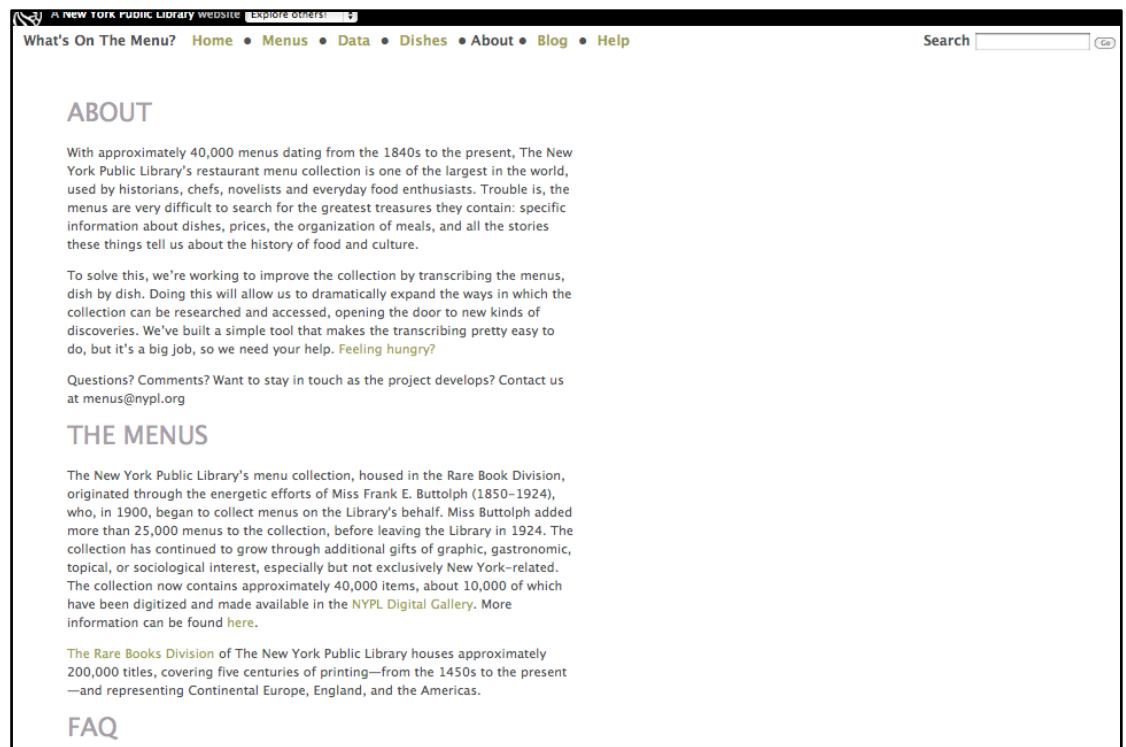


Figure 4 "About" *What's on the Menu?* Web.

The *What's on the Menu?* “About” page prioritizes the value proposition by expanding on the brief description provided on the project home page (see fig.4). It explains in an informal, personal tone how the NYPL’s historical menu collection is unique, why the transcription project

is necessary and what it will achieve, the size of the challenge and how volunteers can help. The copy addresses likely visitor motivations, incentives, potential friction and anxiety throughout. For example, the page informs potential volunteers, ‘We’ve built a simple tool that makes the transcribing pretty easy to do, but it’s a big job, so we need your help ... hopefully you’ll start to get a palpable sense right away of what you’re helping to build. Every transcribed item instantly becomes part of a searchable index, which allows you to much more nimbly trace dishes, ingredients and prices across the collection. We’ll be blogging and tweeting about interesting discoveries that come up along the way. We also hope eventually to offer some fun visualizations of the data.’ Page elements that reinforce the credibility of the project and minimize concern for new visitors include project team profiles that outline other involvements and past experience, a link to another NYPL crowdsourcing project, anchor text that connects visitors with further information, and an invitation to contact NYPL.

While the simple page layout and readable font minimizes friction, this lengthy, text-heavy page is not designed for fast information retrieval. A table of contents at the top of the page linking to the headings and ten FAQs would enable new visitors to locate answers to their questions more quickly (see fig.5). The page might be further optimized with photos and other relevant images, and a clear call to action for visitors to start contributing at the bottom of the page.

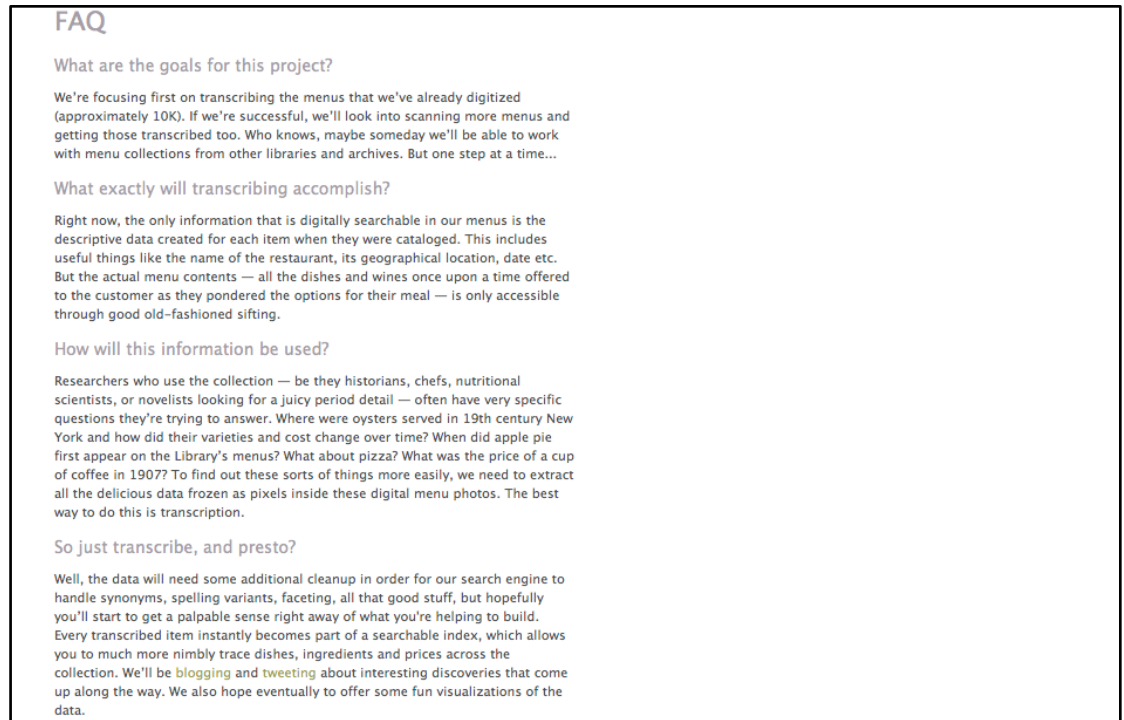


Figure 5 "About - FAQ" *What's on the Menu?* Web.

3.4 Task instructions and guidelines

In order to convert potential volunteers to actual contributors, new visitors need to feel confident that the task they're being asked to perform is manageable and enjoyable, and that sufficient help is provided should they require it. Ideally, a well-designed interface is naturally intuitive to users (Denton 48), but in order to meet the needs of a diverse range of people, task instructions and guidelines must be presented in a way that minimizes any friction or anxiety that could undermine motivation. With regard to getting new visitors on board, *About Face 3: The Essentials of Interaction Design* states 'Standard online help is a poor tool ... it's primary utility is as a reference, and beginners don't need reference information; they need an overview, such as a guided tour' (Cooper, Reimann and Cronin 46).

Although the NYPL crowdsourcing project *Map Warper* provides a virtual

tour for new visitors, *What's on the Menu?* relies on the 'Help' tab of the task interface to explain the process, and the "Help" page to provide more detailed guidelines. The absence of a virtual tour implies the easiest way to learn is to start transcribing, and that any user hesitation will be offset by the instant sense of achievement that comes with directly engaging with the collection.

The screenshot displays the 'What's on the Menu?' web application interface. The top navigation bar includes links for 'What's On The Menu?', 'Home', 'Menus', 'Data', 'Dishes', 'About', 'Blog', and 'Help'. A search bar is located on the right. The main content area is titled 'Park Lane' and shows the date 'November 22, 1959'. It prompts users to 'Submit for review' if they have finished transcribing dishes. The interface indicates it is 'Page of 3 in menu' and provides a 'Dishes' tab, 'Menu Info', and 'Help' buttons. A sidebar on the left contains instructions: 'Help us transcribe this menu!', 'Click on the first letter of any available dish to get going. More info.', and 'See a mistake? Click a dish's green check to edit.' Below this, it says 'Dishes on this page'. The central part of the page features a large image of a handwritten menu titled 'Sunday Brunch', served from 12:30 P.M. The menu lists various dishes including Hall Grapefruit, Melon in Season, Supreme of Fresh Fruit, Choice of Juices, Double Consomme, Eggs Benedict, Country Style Ham Steak, French Pancake, Broiled Filet, Roast Long Island Duckling, Choice of One Vegetable, Creamed Spinach, New Green Peas, Small String Beans, Candied Sweet Mashed Potatoes, COLD BUFFET, Smoked Ham, Roast Turkey, Chef's Salad, Salad Bowl, Jumbo Shrimp Salad, Pumpkin Pie, Chocolate Layer Cake, Red Cherry Pie, Assorted French Pastry, Assorted Cheese, and Selected Choice of Ice Cream. The price is listed as '\$5.00 per person' and the date as 'Sunday, November 22, 1959'. The bottom of the page has social media sharing buttons for Like, Tweet, and Share.

Figure 6 "Menus - Dishes" *What's on the Menu?* Web.

New visitors arriving at the “Menus” page are presented with tabs organising menus into those ‘To Transcribe’, ‘Under Review’ and ‘Completed’, unsupported by any call to action. It is assumed visitors will proceed to the next stage by clicking on a menu image at random, when they will be asked to ‘Help us transcribe this menu!’ and presented with the first in a series of simple instructions and the option to learn more (see fig.6). In October 2011 an addition was made to strengthen this call to action; the first time a new visitor arrives at an individual menu page they are presented with a box in the top right corner that reads, ‘Got a few seconds to spare? Help transcribe the dishes on this menu [Get started...](#)’

In terms of converting potential volunteers to actual contributors, the lack of basic instruction preceding the task interface might be perceived as a gap in the process; this could be a source of hesitation and concern for new visitors unfamiliar with crowdsourcing projects and the kind of technical knowledge that might be required. On the other hand, minimizing the stages (or friction) between arrival and actual transcription allows new visitors prepared to experiment with the interface to more quickly determine whether or not the task is going to be manageable, enjoyable and rewarding in a way that reflects their personal motivations and incentives.

Reinforcing the idea that the project provides volunteers with a substantial but manageable challenge, the “Help” page begins, ‘Our goal in designing *What’s on the Menu?* has been to make transcribing as simple as possible ... [but] the menus themselves are often far from simple’ (see fig.7) This page includes comprehensive guidelines, screenshots and examples to prepare new visitors for situations they’re likely to encounter, and provide

new transcribers with a source of reference. Reflecting the mutually beneficial exchange inherent in the value proposition, the page acknowledges volunteers who have contacted the team with questions and suggestions that have contributed to the development of the guidelines. It also encourages the community to continue sharing ideas and identifying areas for improvement by including the email address at the top and bottom of the page. Like the “About” page, this is lengthy and text-heavy, but in this case a hyperlinked table of contents has been used. Nevertheless, the page has the potential to be overwhelming for new visitors. A complementary video walk-through of this content would be a more user-friendly approach for new visitors, and prevent friction and anxiety during transcription.

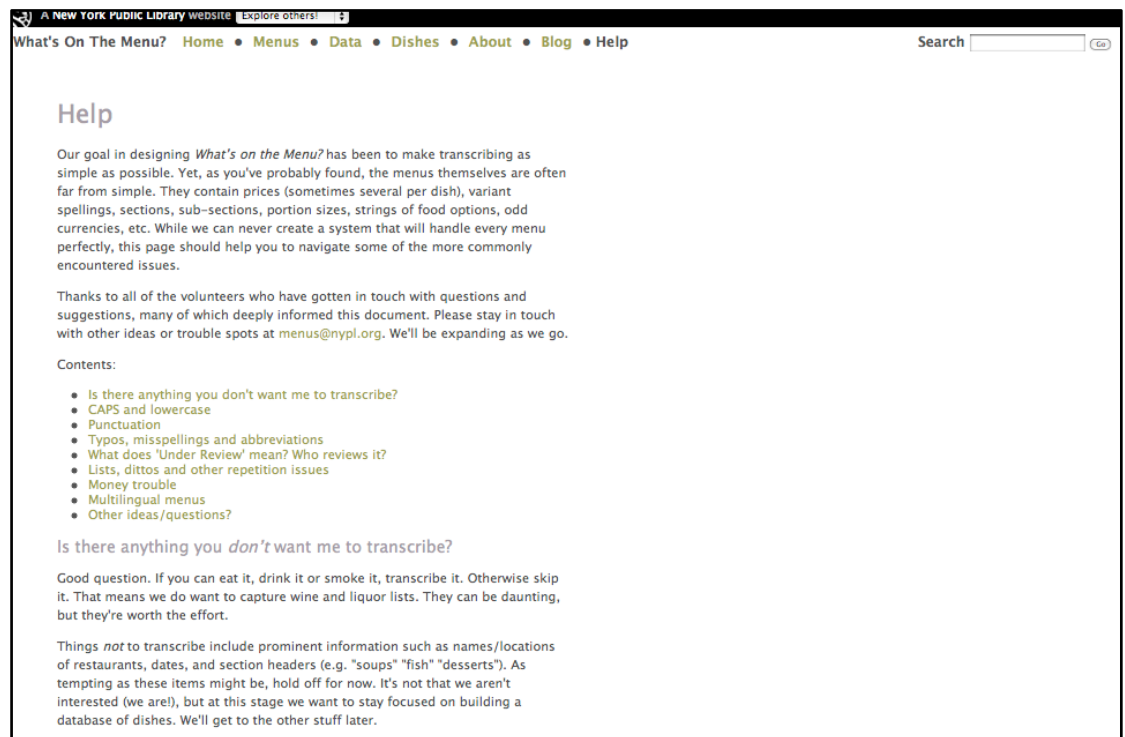


Figure 7 "Help" *What's on the Menu?* Web.

4. Incentivizing the Crowd

4.1 Increasing volunteer contribution

Recent crowdsourcing projects provide evidence that the level of volunteer contribution can range between two extremes; many volunteers complete only one task, and the largest contributions are made by a few. In May 2011, the majority of *Transcribe Bentham* volunteers had worked on only one manuscript, seven users were active on a regular basis, and one volunteer had worked on 550 manuscripts, or 40% of the total. In this case the ‘crowd’ has been described as a ‘gang of a few’ (Wallace and Causer). Similarly, the most active 1% of *Digitalkoot* users contributed almost one third of the work (Chronis and Sundell 4). The challenge for Digital Humanities crowdsourcing projects is not only to increase the number of new volunteers, but also to provide sufficient incentive to maintain the momentum and increase the contributions of this online community.

Volunteer surveys and recent research suggest some approaches that might be taken. In “Crowdsourcing Systems” Doan, Ramakrishnan and Halevy discuss how project websites might encourage and retain users by ensuring an enjoyable experience, acknowledging participation and top contributors, promoting a sense of ownership over the system, and providing ‘instant gratification, by immediately showing a user how his or her contribution makes a difference’ (94). *Trove* volunteers indicated that public recognition, public ranking tables, user profiles, and the ability to communicate with other volunteers would be effective incentives (Holley, “Many Hands”). Digitization Project Manager Alastair Dunning suggests website curation influences the volunteer community in this regard,

whereby the use and interpretation of new data being generated by volunteers can be incorporated into regular website updates to keep volunteers interested (“RunCoco”). The following chapters examine how Digital Humanities project teams can optimize the task interface, workflow and virtual community spaces with a view to enhancing the user experience and increasing volunteer contributions.

4.2 Task interface

Much is demanded of the volunteer task interface; it must be an inviting workspace that users are happy to engage with regularly, and tasks must be broken down in a way that’s manageable, achievable, meaningful and challenging. It needs to be intuitive, and deliver instruction in a way that optimizes volunteer participation. In a discussion of the task interface, “Manuscript transcription by crowdsourcing” points out, ‘there are numerous potential demographic groups of participants for the project, and the site must strive to provide a welcoming, rewarding and addictive experience for volunteers of all ages and backgrounds’ (Moyle, Tonra and Wallace 351). This part of the website relies heavily on effective interaction design, which concerns the options involved in performing and completing tasks (Garrett 87). In *The Art of Community: Building the New Age of Participation* Jono Bacon encourages project teams to ask ‘Is this step really required? How easy is this step to understand? Could it be simplified?’ (124). Surveyed *Trove* volunteers also emphasised the importance of specific instructions that make it clear what is expected (Holley, “Many Hands”). Applying McGlaughlin’s five-element website optimization

framework to the task interface can help to determine how page elements impact on the objective to increase volunteer contributions.

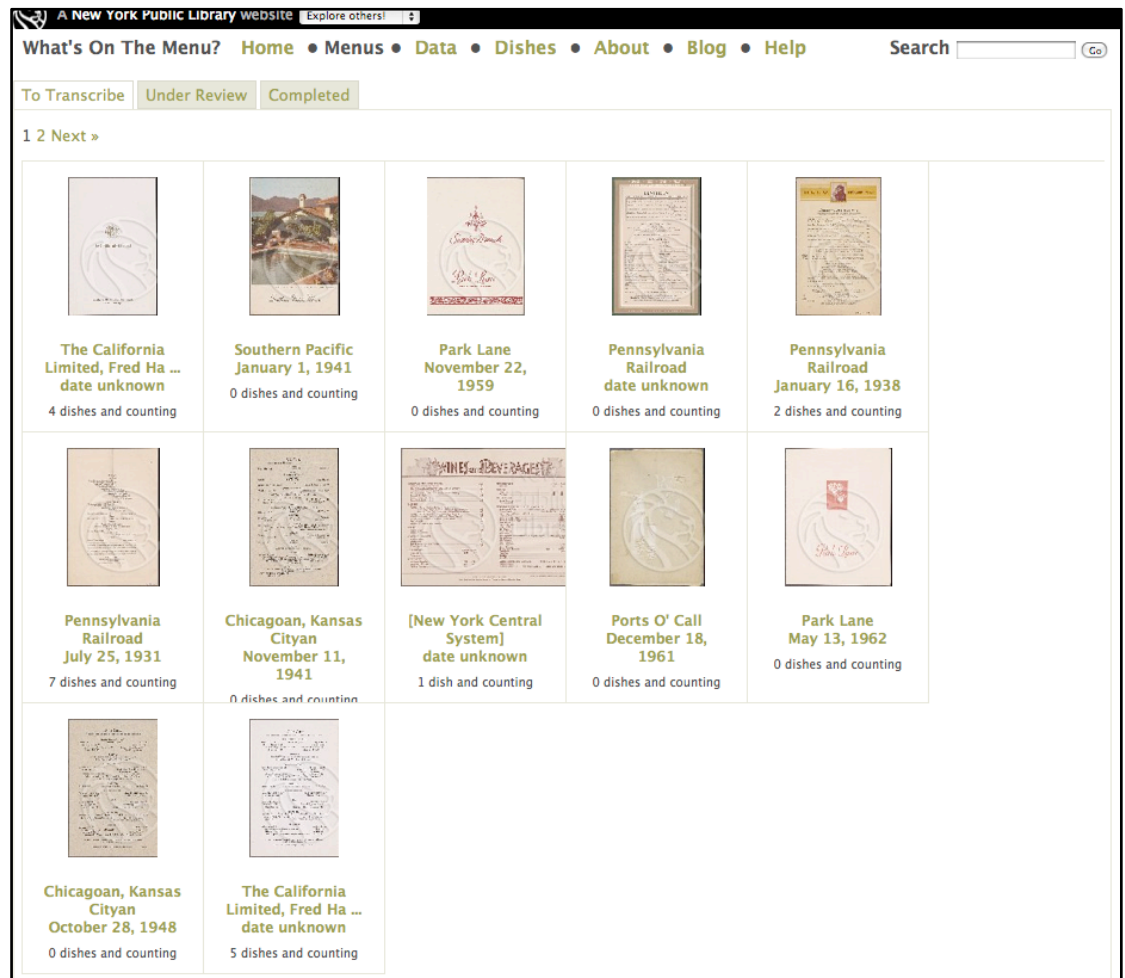


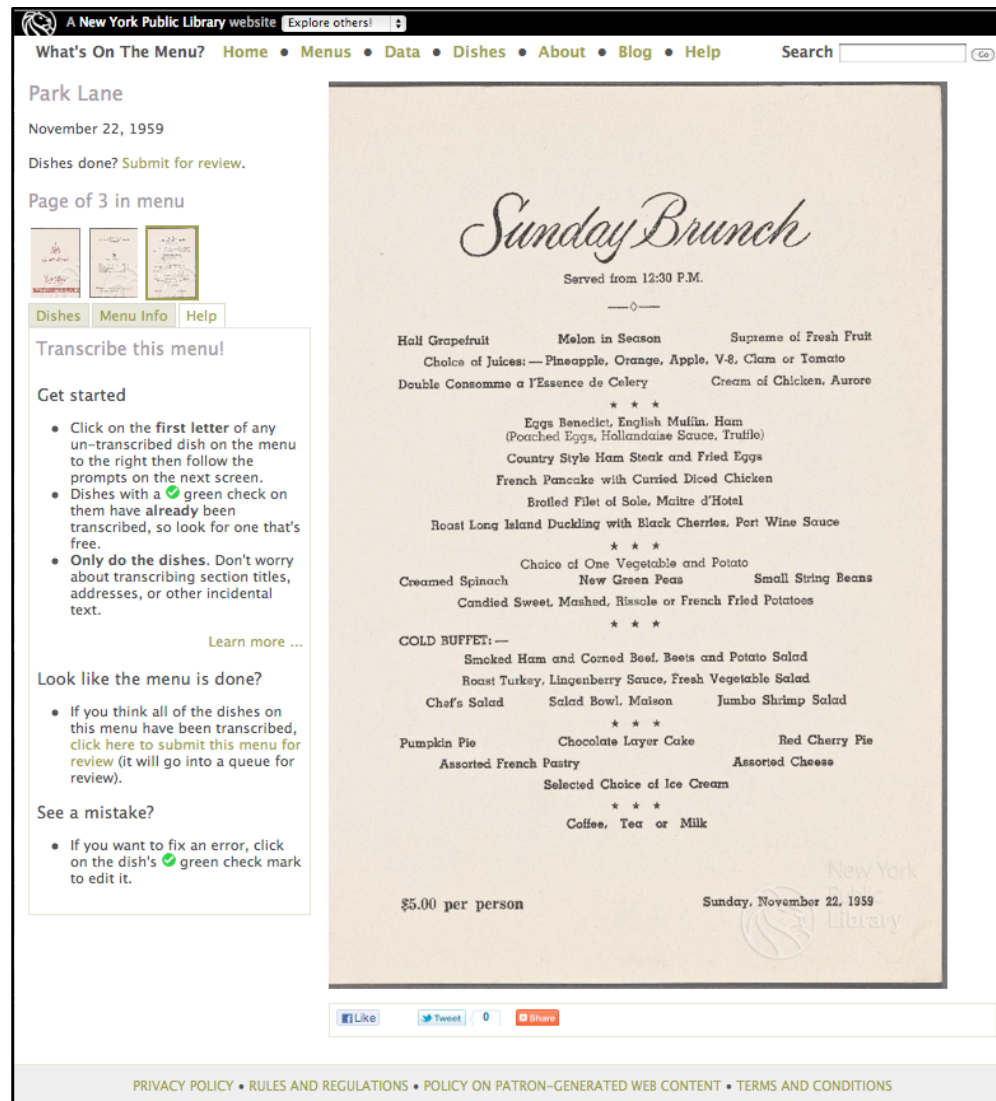
Figure 8 "Menus" *What's on the Menu?* Web.

As previously mentioned, *What's on the Menu?* volunteers are first presented with a selection of menus organised under three tabs (see fig.8). They have the option to transcribe a menu of their choice, review menus already transcribed, or view (and potentially 'unlock') menus already completed. The wide assortment of inviting menu covers, accompanied by restaurant names and dates, supports the value proposition by highlighting the uniqueness and extent of the collection, and allows volunteers to select

menus that reflect their personal interests. The constantly updated selection and number of dishes transcribed conveys the size of the challenge, and provides proof of activity and progress. The ability to view a wide range of completed menus provides actual examples for new volunteers, which as a form of instruction serves to minimize anxiety.

The available time volunteers will have to contribute on any given day differs considerably; some can spare several hours, others only minutes. To maximize volunteer ‘spare cycles’ Howe explains, ‘tasks have to be constructed to accommodate a range of commitment levels’ (219). The *What’s on the Menu?* dish-by-dish transcription approach means even volunteers with only a few minutes to spare can contribute. Organising the menus into three categories that require varying levels of time and attention makes it clear that this is a collaborative effort, and even those with limited time can have the satisfaction of submitting a fully transcribed menu. Constantly updating the number of dishes transcribed for each menu conveys to volunteers that every line of transcription makes a difference, and brings the institution closer to achieving its goal.

Displaying a large number of images can be a source of friction, slowing page load speed and causing user frustration; the website addresses this by using small-scale ‘thumbnail’ images and limiting the number of images on each page. These are displayed ‘above the fold’ so menus can be viewed without scrolling, and volunteers can browse additional menus using the hyperlinked page numbers or ‘breadcrumb navigation’ above.

Figure 9 "Menu page - Help" *What's on the Menu?* Web

Having made their menu selection volunteers move to the second page of the task interface, where they're presented with a full-page image, menu information, and a list of any dishes already transcribed. Concise instructions are delivered in a personal tone and step-by-step manner on a 'need to know' basis (see fig.9). Green tick icons are used to indicate each line already transcribed, which promotes a sense of accomplishment and clearly indicates to volunteers where work remains to be done. Discrete social media icons at the bottom of the page enable volunteers to easily

share the menu and the project with others. Together with the clean uncluttered design, these elements minimize friction and anxiety and contribute to an inviting virtual workspace that incentivizes volunteers to participate.

4.3 Workflow and Acknowledgement

Optimization of the transcription process requires a balance between accuracy and speed; as Garrett explains, any effort to enhance the user experience aims to improve efficiency, and ‘basically comes in two key forms: helping people work faster and helping them make fewer mistakes’ (18). In the context of crowdsourcing, workflow must also be designed to accommodate volunteers with only a few minutes to spare, and others transcribing for several hours. Because recent projects have shown that acknowledgement is an incentive that influences the rate of participation, this is also examined in the context of increasing volunteer contribution.

While the transcription interface for *What’s on the Menu?* helps volunteers make fewer mistakes, the ways in which it helps them work faster are limited. Transcribing the menus one dish at a time creates easily manipulated data, minimizes the potential for error and confusion, and makes each task the work of mere minutes. For better accuracy a green arrow is placed alongside the dish to be transcribed, and users have the ability to position and magnify the highlighted text (see fig.10). Concise instructions are presented in simple language and large font (‘What does this say?’), and the large fields provided for transcription are limited to dish and price. No superfluous page elements distract from the task at hand, and

volunteers can indicate if they've had trouble reading the text after typing their 'best guess'.

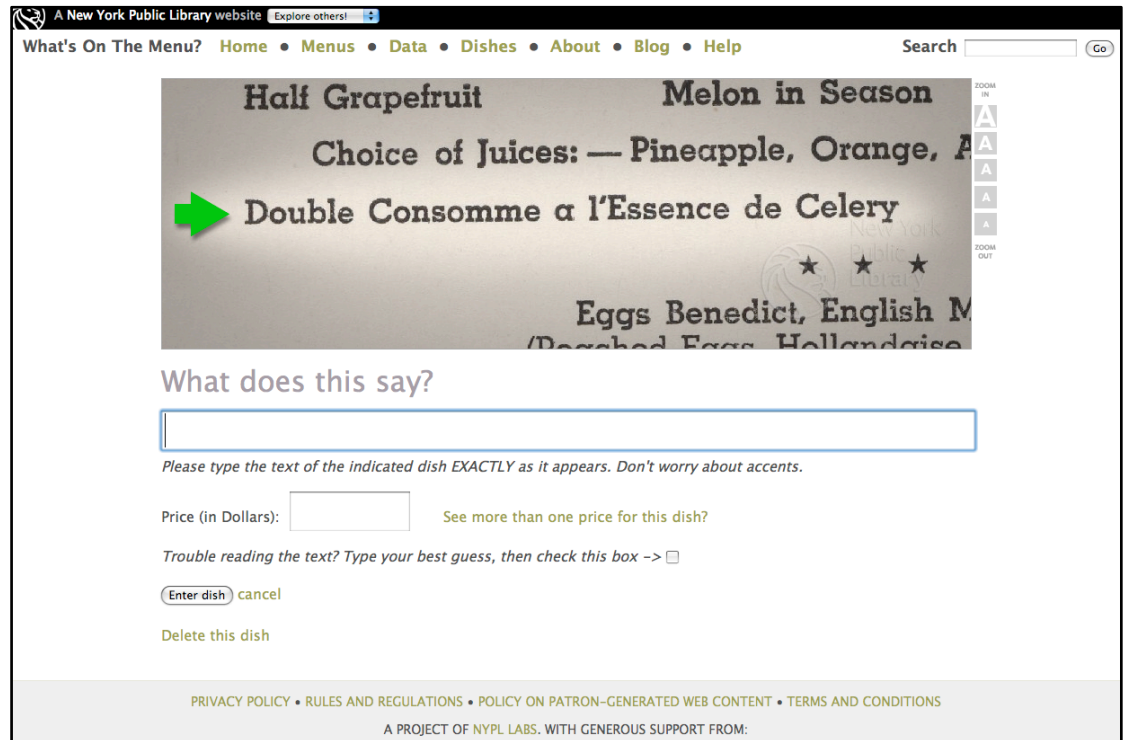


Figure 10 "Menu item" *What's on the Menu?* Web.

Despite the user-friendly interface, several sources of friction impede volunteer progress. The magnified green arrow sometimes obscures part of the text, making it necessary to return to the previous page and reposition it; this can take longer than expected if the page is slow to reload (or 'hangs'). If the user is required to refresh a page because 'Enter dish' does not respond, transcriptions are sometimes duplicated. Furthermore, each time a dish is transcribed, the 'Enter dish' button redirects the volunteer back to the previous page with the full-page image. For regular volunteers confident with the interface, there is no system in place to continue transcribing without returning to the original page each time.

While this ensures each transcribed dish is instantly saved and searchable, it's an unproductive repetitive action that soon becomes dull and does not optimize users time.

Experts are likely to 'demand faster access to their regular working set of tools' (Cooper, Reimann and Cronin 47), and Holley has acknowledged that a 'power mode' would have enabled *Trove* volunteers to correct text more quickly and easily, and correct whole articles at a time ("Many Hands"). Simplifying the transcription process during the *What's on the Menu?* pilot phase encourages new visitors to participate, and maximizes the contributions of the many rather than the few. However, as the most work is likely to be done by a small proportion of volunteers transcribing for substantial periods of time on a regular basis, enhanced functionality that enables them to achieve more in less time might better serve the website objective in the long term.

Despite this, workflow is eased and momentum maintained by the step-by-step instructions and acknowledgements appearing at each stage of the process. Anchor text prominently located in the top left corner of the screen invites volunteers who have completed a menu transcription to 'Submit for review', and those who have completed a review to 'Mark as complete' (see fig.11). Menus are clearly marked with their current status, and contributions are acknowledged with 'Menu marked complete! Well done!' appearing at the top of the screen. It's suggested that redirecting volunteers back to "Menus" once a menu has been marked complete, and inviting users to submit feedback about the process at this point could be ways to further optimize workflow. In addition, pre-organising menus by

language or distinguishing between those typed and handwritten might enable volunteers to more quickly select menus that suit their level of expertise and ability.

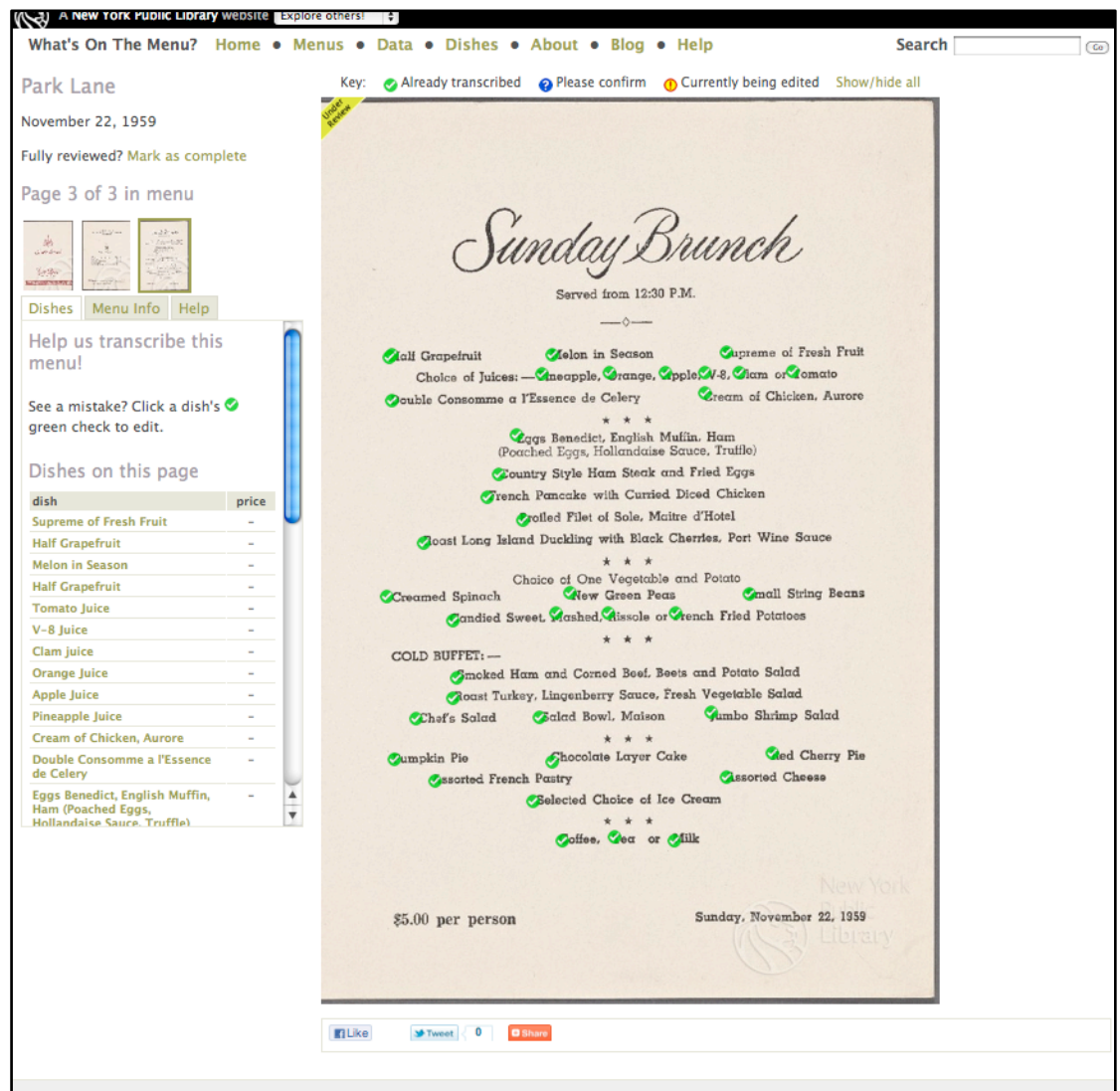


Figure 11 "Menu - Under Review" *What's on the Menu?* Web.

What's on the Menu? doesn't currently track individual volunteer participation or acknowledge top contributors, but this functionality may be incorporated in time; NYPL's project application to the National Endowment for the Humanities states the website will include a 'user

registration/login system’ and a ‘progress meter, contributor leader board, prizes, and other game-like features’ (“What’s on the Menu? Crowdsourcing Culinary History”).

4.4 Community

Howe observes that ‘the crowd moves in mysterious ways, and attracting a crowd is much easier than keeping them. With few exceptions, the most important component to a successful crowdsourcing effort is a vibrant, committed community’. He also cautions, ‘don’t try to control the discussion, just provide the room in which it takes place’ (251, 282). Holley’s *Trove* research also found that creating an online environment of camaraderie would incentivize volunteers, who said they would work more effectively and feel more accountable if they felt they were part of a team or virtual community. This could take the form of personal profiles, social networking, and online forums (“Many Hands”). Similarly, Denton’s crowdsourcing prototype revealed that ‘the desired level of discussion ... was much more than a simple comments page could handle. People wanted to ask questions, discuss general ideas, share inspiration, and have other conversations related to a project’ (46). Another aspect for Digital Humanities project teams to consider is that the community is likely to outlive the original project, and could be invoked at a later stage (Vukovic, Laredo and Rajagopal 463). As Holley explains of *Trove*, ‘The social impact the service is having in the community and to individuals is equally as important to users as the improvement to the data. The Library has been unable to quantitatively measure either thing’ (ibid).

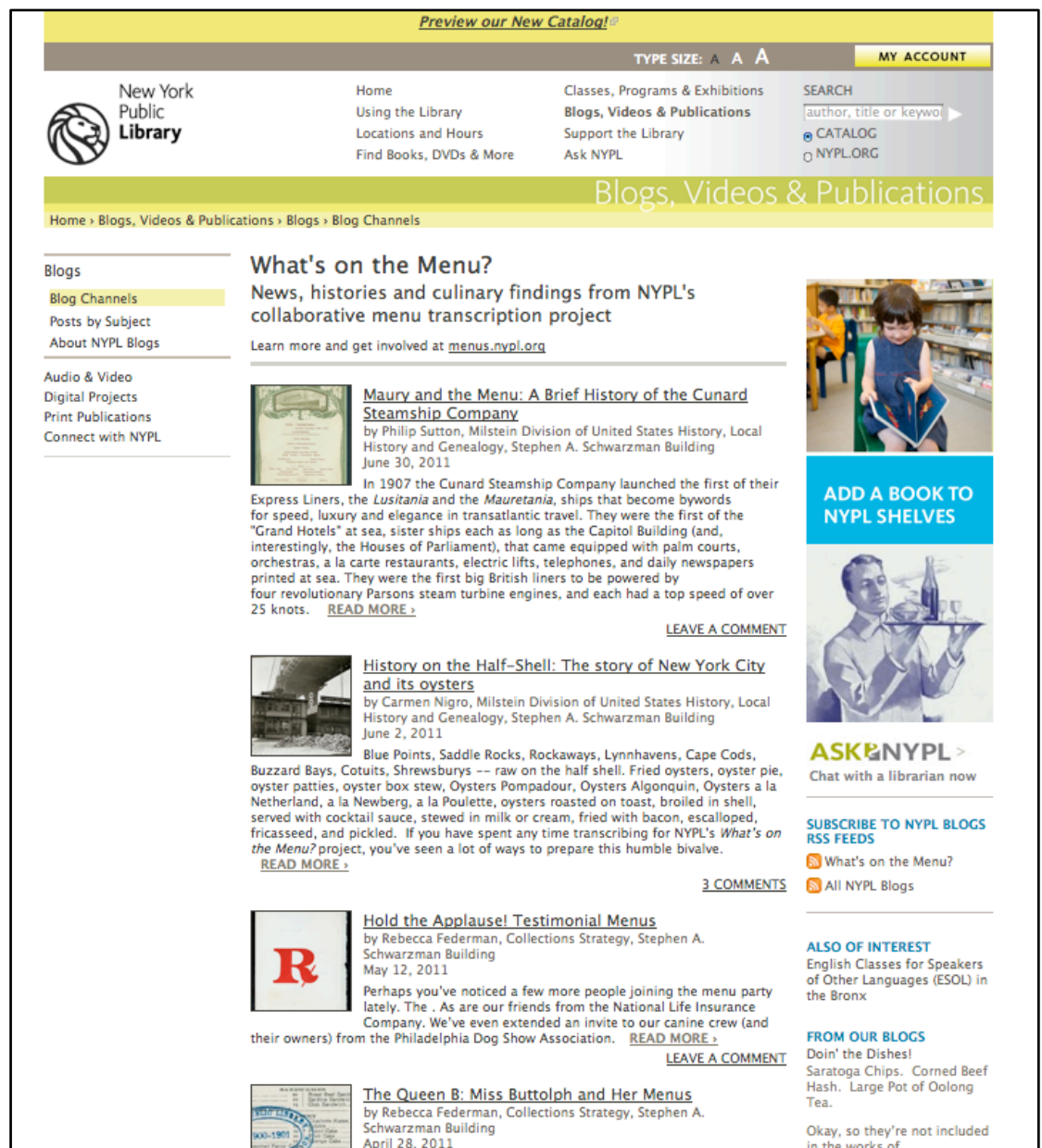


Figure 12 Blog. "What's on the Menu?" New York Public Library Web.

What's on the Menu? volunteers are not currently able to communicate with each other or the project team on the website itself, but can interact on social networks and the project blog (see fig.12). At present, the communication on *Facebook* and *Twitter* seems to be predominantly one-way, with project updates posted by the team prompting little response

from volunteers. However, visitors have taken the opportunity to indicate their interest and support for the project by ‘liking’ and ‘following’ these pages, and occasionally sharing the content. The limited interaction could reflect the demographic of the volunteer community, who may be unfamiliar with social networks, or the nature of the content being posted, which focuses on collection-related discoveries rather than volunteers and their project experience. Alternatively, it could indicate that online communication is taking other forms; during the course of this research several personal blogs relating to culinary themes were observed discussing the NYPL project,⁸ and volunteers regularly comment on the *What’s on the Menu?* blog itself.

The blog states its purpose (and by extension, the social networks that post similar content) is to inform visitors of ‘News, histories and culinary findings from NYPL’s collaborative menu transcription project’ and prompt them to ‘Learn more and get involved at menus.nypl.org’, thus prioritising and supporting the value proposition. Volunteer motivation and incentive are addressed by providing additional information about items in the collection, interface updates and volunteer assistance, and enabling community interaction. However, the most recent post to be viewed in October 2011 was uploaded in June, which might imply the project is suffering from lack of attention, and could be a cause of concern for visitors deciding whether or not to get involved.

⁸ For examples see “What’s on the menu-A New York Library project.” *Liberal Sprinkles*; “NYPL: What’s On The Menu?” *Medellitin*.

How the potential for friction might be evaluated is debatable; any new visitors and potential volunteers navigating to the blog will be taken away from the project environment to the main NYPL website, which could be a distraction that negatively impacts on conversion. On the other hand, promoting the project on the main NYPL site could increase the number of new visitors to *What's on the Menu?* and encourage existing volunteers to get involved in other library projects. A search for NYPL on the web information site *Alexa* on 25 October 2011 showed that only .86% of online visitors navigate to *What's on the Menu?* from the main library site. Depending on the number of visitors this represents, this may suggest the blog functions more effectively as an online community space for existing volunteers than a vehicle to increase traffic to the project website.

Having concluded the case study, it should be emphasised that while paying close attention to the role of each web page and page element, project teams also need to consider the website holistically as users do - an experience with a beginning, middle and end (Powazek 40). While it may seem like a lot of work to put the concepts discussed here into practice, Garrett argues that it's as much a question of mindset as time and resources. He explains that too often the decisions impacting on the user experience and effectiveness of a website aren't made consciously, and describes three common scenarios: the website either follows the structure of the underlying technology or the organisation, adheres to familiar conventions, or is the product of personal preference. According to Garrett, 'the right approach is one in which no aspect of the user's experience is left to chance. Make

every decision consciously and deliberately and ground each decision in your understanding of the underlying issues at play' (161-167).

Conclusion

The ever increasing number of crowdsourcing projects driven by established academic and cultural heritage institutions provides ample proof that crowdsourcing is rapidly becoming a mainstream resource for the digitization and enhancement of collections. This paper has sought to contribute to future crowdsourcing projects in New Zealand by demonstrating how website optimization can be used to harness the potential of the crowd more effectively, and increase volunteer contributions. Following an overview of website optimization in theory and practice, it explained how an optimization framework for conversion, based on McGlaughlin's commercial observations, is relevant to non-profit crowdsourcing projects. It addressed various methods of testing websites and tracking online visitors and volunteers, encouraging project teams to quantify and qualify the website's effectiveness as much as project budgets allow.

What's on the Menu? was presented as an example of a particularly well-optimized website, and a three-part examination highlighted the three main objectives for Digital Humanities crowdsourcing projects. Firstly, the paper addressed how websites need to effectively invite the crowd in order to convert online visitors to potential volunteers. A discussion of the institution home page, marketing communication channels, the project home page and volunteer registration identified related issues that project teams need to consider, and demonstrated how these pages and processes support this objective. Secondly, it emphasised the importance of effectively

instructing the crowd to convert potential volunteers to active contributors.

A detailed analysis of *What's on the Menu?* demonstrated how various forms of website navigation, pages dedicated to project background, task instructions and guidelines contribute to this objective. Finally, the paper considered how volunteer contributions might be increased through incentives aligned to volunteer motivation, and considered the task interface, workflow, volunteer acknowledgement and community in this context.

Just as crowdsourcing isn't a single strategy, website optimization takes many forms, and aspects of the process are represented by several methodologies as this paper has acknowledged. The main purpose of this discussion and examination has not been to argue for exclusive adherence to one method of optimization, but to give Digital Humanities project teams a deeper understanding of the main elements impacting on volunteer participation, and demonstrate a practical means of application using an optimization framework based on real-world observation. In the process it has illustrated how the translation of knowledge, from Computer Science and the commercial world to the Humanities, might stimulate cross-disciplinary initiatives and research, and better equip New Zealand academic and cultural heritage institutions to enhance their digital collections using the power of the crowd.

About the author

Donelle McKinley graduated from the University of Auckland in 1997 with a BA (English and Art History), and has worked in academic and online publishing. As an online copywriter she specialized in website optimization, SEO and social media, and completed Flint McGlaughlin's optimization course for professional development.

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